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RECORD OF ORAL HEARING
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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte JOSEPH WAYNE NORTON,
GARY HAYATO OGASAWARA, JONAN SCHWARTZ,
DAVID STONE, and MICHAEL MAN-HAK TSO

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Appeal 2009-012381
Application 10/686,741
Technology Center 2400

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Oral Hearing Held: June 22, 2010

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Before KENNETH W. HAIRSTON, THOMAS S. HAHN and BRADLEY W. BAUMEISTER, Administrative Patent Judges.

ON BEHALF OF THE APPELLANT:

STEPHEN W. PALAN, ESQ.
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The above-entitled matter came on for hearing on Tuesday, June 22, 2010, commencing at 9:59 a.m., at the U.S. Patent and Trademark Office, 600 Dulany Street, 9th Floor, Alexandria, Virginia, before Kevin E. Carr, Notary Public.

THE CLERK: Calendar No. 54, Appeal No. 2009-012381, Mr. Palan.

JUDGE HAIRSTON: Okay.

Counselor, do you have a business card?

MR. PALAN: I actually do.

JUDGE HAIRSTON: For the record. Thank you.

The reference we're going to discuss today is B-o-y-l-e.

You may begin.

MR. PALAN: Good morning. My name is Stephen Palan. I represent the Appellant in this matter.

What we'd like to do is first provide a brief overview of the Invention, a brief overview of Boyle. And then jump into the heart of the argument.

What I'd like to point out, with respect to the argument itself, was while preparing for the hearing yesterday, I believe that the interpretation, what we thought was the way the Examiner was interpreting the reference in the Examiner's Answer may not have been what he intended.

And I believe we now understand what he intended in his interpretation of the reference.

So with that, I'll start off with an overview of the invention.

The invention involves message storage and retrieval that's both scaleable and fault tolerant. Previous systems would either involve a single

server or multiple servers, and in the case of multiple servers, would require human intervention for load balancing and fault tolerance.

So for example, in a prior system, if a server became overloaded, having either too many messages being stored on it, or too much access to the server, to do load balancing, you would have to copy an entire mailbox from one server to the next.

So in that case, that mailbox would be unavailable during the copying operation. And if the mailbox is large, it could take a very long time.

What our invention is about is using what we call "addressing functions." And the addressing functions correspond to the topology of the network.

So before I provide an example, just to be clear, as the network topology changes, new addressing functions are used.

In our invention, the most recent addressing function is used for message storage, whereas a plurality of addressing functions are used for message retrieval.

And it will become a bit more clear, once I jump into the example. So referring back to the example of load balancing a mailbox.

Instead of moving a mailbox and making it unavailable, with our invention what we could do is redirect newer messages to a different node, a different server, you know, by adding the server, which would change the topology of the network, which would be a new addressing function.

So as messages come in for this person, the most recent addressing function would be used, which would push the newest messages to the newest server.

However, now you have messages on two servers. So as in our claims, you're using multiple addressing functions to retrieve messages.

So when you go to retrieve, you would use the most recent, plus, you know, at least one other addressing function. And it would point to two different nodes.

So then you could access the messages stored on both nodes.

To avoid the addressing functions from living eternally, they can have expiration periods associated with them.

So if messages can only be stored on a server, for example, for 30 days, an addressing function can have a 30-day expiration period.

So that, you know, once the messages are deleted from the old server under the 30-day time period, that addressing function would expire.

And then if you went to retrieve, you would only be looking to the newer node that stores the messages.

So moving on to what Boyle discloses, what Boyle's about, is reducing the amount of network load on a narrow-band channel for retrieving information that may be updated on a relatively regular schedule.

So what Boyle discusses is, instead of sending the updated content to the mobile device, what you do is you send notifications to the mobile device that content has been updated.

So if you look at Figure 2 of Boyle, what you do is the web server device 202 would have a list of URLs and an associated subscriber

identification, which you can see in Figure 5, which has the subscriber ID associated with a number of URLs.

So as the information corresponding to a URL is updated, the web server device would send a notification to the link server device 114.

Link server device 114 would then send the notification over the narrow-band channel to the client device 106. That could produce an alert to the user.

Now the user wants to, it's not automatic, but when the user wants this updated content, the user would then request it by using the wide-band channel, which is better able to handle the larger amount of information as the content itself, compared to the notification.

And so that would be pushed through the wide-band channel, back to the web server device, which would provide the updated content.

Now to get a bit more specific, because what it appears from looking at the Examiner's Answer again, if we look at our Claim 1, what it appears is that for Claim 1, the Examiner actually is only focusing on the notification component of Boyle over the narrow-band channel, and that the Examiner is reading the device identification as the addressing functions.

And the reason why I've come to that conclusion is really if you look at page 9 of the Examiner's Answer, under numbered paragraph 1, the second paragraph under there, the Examiner talks about "using the narrow-band or wide-band channel is determined by both a device ID and a subscriber ID."

Both the device ID and the subscriber ID are used to establish the connection. And then he quotes our language about plurality of addressing functions.

Since our claim requires the use of both a subscriber ID and a plurality of addressing functions, it seems that the subscriber ID of Boyle is being interpreted as our claim subscriber ID.

And the device ID of Boyle is being interpreted as the addressing functions.

Are there any questions on that? I'm sorry to --

JUDGE BAUMEISTER: That was my take on it.

MR. PALAN: Okay. Okay.

So then the question is, is whether, when that interpretation is applied to the claim, whether that holds up.

And our position, of course, is no.

First of all, our plurality of addressing functions, as discussed earlier, correspond to a topology of the network at a particular point in time.

The device ID does not.

The device ID identifies the device. The Examiner tries to equate the fact that the notifications that are sent are maintained in a notification queue, and as it's delivered, that is taken out.

The device is still on the network. Whether it's in the queue or not, the device is still in the network. The topology of the network does not change, depending upon whether the device corresponding to the device ID has received or has not received that notification over the narrow band channel.

So it's not related to the topology of the network. It doesn't correspond to the topology of the network at a particular moment of time, as our claim requires.

Another thing is, is the addressing function itself. That term, "addressing function." The claim doesn't say "an address," which a device ID would be. It's an addressing function, which we believe one skilled in the art would interpret as a function used for addressing, not just an address, but as we describe using a hashing function as the addressing function.

But it would have to be some type of mathematical function, not just an address itself.

So we think that if the device ID was read as the addressing function, that would be weeding out the term "function" from the claim.

JUDGE BAUMEISTER: Do you think the Examiner was, albeit a little sloppy, by saying a device ID, if you're accessing a device ID, you're implicitly using some sort of function to access it or address it, or read it and that there's a function associated with discussing it?

MR. PALAN: I think that goes to -- another distinction is we calculate using the addressing function, so again it brings in this idea of a mathematical calculation, whereas what you're describing would really be a determination.

And if we look at Figure 2, I can break it down a little bit better, is the web server device, it understands it stores subscriber IDs. Because all it cares about is who subscribes a certain URL.

The link server device is actually the one that, because it's sending the information over the air interface, is the one that would actually include the device ID, subscriber ID mapping.

So really when the link server device receives a notification from the web server device, it would receive a subscriber ID, because the web server device only knows subscriber IDs.

It would then just look it up in a look-up table. So it would really just be a determination, not a calculation using an addressing function.

JUDGE BAUMEISTER: If I may ask, what does it mean to calculate a plurality of nodes?

MR. PALAN: I think it's a bit awkward, the way that it's phrased. But I think the concept was to get across this idea of a mathematical calculation, compared to just a determination.

So you're really determining by calculating. What you're doing is -- the result of the calculation is something that can be used to identify the destination nodes.

JUDGE BAUMEISTER: Okay. Because my reading of the claim -- tell me if I'm wrong -- was what it was trying to say is: First you're trying to identify what nodes are present or determine the topology.

So I was reading calculating a plurality of destination nodes to be synonymous with either identifying a plurality of destination nodes or determining a plurality of destination nodes.

MR. PALAN: Well, I think it could be either, but it's done through a calculation using an addressing function -- a combination of the subscriber ID and the addressing function.

So I think because the next step is querying what you've identified. But I don't think that you can read it as just a pure determination, you know, a pure look-up table determination, like you would with "Here's a subscriber ID, which device ID corresponds to it? Let me now send it over."

I think that's what they're trying to get across with the word, calculating, that there is this mathematical calculation performed, and not just a pure determination.

JUDGE BAUMEISTER: So can you give me an example? You know, I guess this isn't my area. This addressing function when you're doing a hash, how does that exactly work when you look out and you see there's X number of nodes, and then you're hashing that and somehow determining from that number, you --

MR. PALAN: The example provided in the specification, which I don't think is claimed, is actually using the MS ISDN, the mobile station identifier, modulo the number of nodes in the network.

In that calculation, what that does is you're basically dividing the mobile station identification number by the number of nodes in the network, which will then produce a remainder. That remainder is the result of the calculation in the particular hash function disclosed in the specification.

So that remainder would then be used as an index in a table to look up the IP address. So if the remainder is 4, you look for the fourth index in this table. That will tell you the IP address of the node storing the message, or the node to which the message should be stored.

JUDGE BAUMEISTER: Okay. So the destination nodes doesn't necessarily have to be based on location, then? It's just whatever order it's in?

MR. PALAN: Yes, yes. You know, yes.

JUDGE BAUMEISTER: Okay.

MR. PALAN: Simple answer.

(Laughter.)

Another distinction, I think, is the way this -- because this Claim 1 talks about actually the message retrieval component, and not the message storage component of the invention.

So we are calculating a plurality of destination nodes, using a subscriber identification and a plurality of addressing functions. And, you know, what we talked about in the example earlier, and how that would be used.

So it's a subscriber ID in a plurality of addressing functions; whereas if you were to accept the Examiner's interpretation that the subscriber ID is the subscriber ID and the device ID is the addressing function, you would not identify a plurality node, using a subscriber identification in a plurality of device IDs.

That disclosure is just not in Boyle. You know, you would use the subscriber ID'd item by the device ID. You would then send that out to the destination wireless device.

And then the other distinction, of course, is the calculating versus determining distinction.

Another distinction, going back to, you know, the Examiner's reading the sending of the notification over the narrow band channel and the confirmation response from the mobile device as being the transaction that's covered here.

And so the Examiner's reading I believe the confirmation message as you know, whether's it's the topology of the network.

But our claim requires querying the destination nodes for a message; whereas the sending of the content notification update in Boyle is not querying the client device for a message.

The fact that there is a confirmation sent is not a querying for a message. That confirmation is sent automatically. The notification isn't saying, "Give me a confirmation." That's just what happens in that short-message system technology.

Are there any other questions on Claim 1?

JUDGE BAUMEISTER: I guess one thing that would clear it up real easily and short-cut a lot of the ambiguity:

Would you be willing to acknowledge that in your specification that you're using the term, "node," and you had mentioned that, you know, it's intended to be a server on the network?

And the Examiner is reading node to be the mobile unit, the terminal unit, or using the language of your specification, "destination user device."

And it seems from your spec that you are making a distinction, saying: In the past we'd store messages on destination user devices. That has problems, so instead we're storing them on these nodes.

So would you be willing to admit that as used in your specification, a node is distinguishable from a terminal or a destination user device?

MR. PALAN: Yes. I'm not sure that I'd be willing to say that a node is necessarily a server. Because there's different ways the nodes are used in the network, and not every node in the network is necessarily storing a message.

JUDGE BAUMEISTER: But a node is not a terminal --

MR. PALAN: End user device.

JUDGE BAUMEISTER: Yeah.

MR. PALAN: Yes, correct.

JUDGE BAUMEISTER: Okay.

That's the only question I have.

JUDGE HAIRSTON: Any questions?

JUDGE HAHN: I have none.

MR. PALAN: Okay.

And I just wanted to walk through some of the, under this new understanding of the Examiner's rejection to some of the other dependent claims.

For example, I think we addressed this a bit in the Examiner's Answer. So it may be a bit duplicative. But Claims 4 and 5 both require, you know, "and in addition to the node is the wireless handset."

And so if the client device, which in Boyle is some type of wireless device, if that's a node, then what is a wireless handset in Boyle, which goes to your point?

And then similarly, under the interpretation that the device IDs are the addressing functions, for example, in Claims 10, 18, and 30, we have that we're expiring one or more of the addressing functions, based on a message of validity.

Device IDs are not themselves expired. The Examiner cites to column 16, lines 11 through 13, which talk about, you know, if you're trying to send out a portion of a notification to a client device, and you're not successful after a number of tries, using a time-out value to stop sending it.

Which makes sense, because you're wasting wireless resources.

But although it's not explicit in that portion of Boyle, from other portions of Boyle, it appears that it would just maintain that in the

queue list, so that once the client device becomes available again -- for example, it is turned power back on -- then it would go through the wide-band channel to get the notifications.

And that turning on is described I think in -- oh, I'm sorry, that's discussed in column 12, lines 22 through 37, where it talks about a device being out of coverage, and therefore you'd store the notification until it actually comes back within coverage.

Which I think is probably a very common short message system protocol, so that you aren't continually sending out notices to someone that's not responded.

For, you know, again with Claims 11, 19, and 31, we have an expiring of the addressing function, the device IDs are not expired under that, the theory put forth by the Examiner of timeout.

Instead, it appears that it would probably be stored in a queue for later delivery to the mobile device.

And then with Claims 13 and 33, we would talk about the addressing functions being hash functions. We don't define the particular hash functions as we do in the specification.

And here the Examiner says: Well, the messages are encrypted between the link server and the mobile device. I think there are two issues with that.

I believe that all cryptography methods are not necessarily hash functions.

And since we have an anticipation rejection, which requires either an express or inherent disclosure, because there's no express

disclosure of a hash function, the question is: Must cryptography necessarily be a hash function?

And our position would be: No, that there's other type of cryptography that don't require hash functions.

JUDGE HAIRSTON: Counselor, I'm going to have to cut you off. I can give you one more minute.

MR. PALAN: Okay.

JUDGE HAIRSTON: Please sum up. Okay?

MR. PALAN: No, no. That's fine. And then, you know, Claim 34, it's similar issues of the calculating the addressing function.

So that was really the issues we wanted to clarify with the hearing.

Were there any other questions?

JUDGE HAHN: I have no question.

JUDGE HAIRSTON: You answered mine.

Thank you, Counselor.

MR. PALAN: Well, thank you.

Whereupon, at 10:23 a.m. the proceedings were concluded.